

ECONOMICS, OBJECTIVITY, AND SCIENCE: USEFUL CLASSROOM DISCUSSIONS

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Abstract

This paper describes classroom discussions that will help students understand the sense in which economics may be regarded as a science and the role of subjectivity in analyzing economic questions.

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Introduction

When we teach undergraduates, we naturally focus on the economic way of thinking as an analytical framework, guiding students in using a set of principles to understand economic phenomena. However, there is also a set of meta-principles at play that often do not receive enough attention. How economic principles are used (and misused) outside the classroom, how they inform debates, and how students can confidently take their own stand in these debates are arguably as important as the principles themselves. An economics class presents an excellent opportunity to instruct students more generally in thinking carefully and expressing ideas.

While it is typical for an introductory textbook to discuss the types of controversies involving economics that arise in the public sphere, this discussion tends to be cursory and often gives the impression (or even states directly) that there is a sharp dichotomy between subjective and objective issues, that there are value-laden applications of economics but that the scientific conclusions of economics are not open to debate. Even if a textbook, or an instructor, does not intend to leave that impression, it is useful to discuss pointedly what it means for economics to be regarded as a science and whether and to what extent the conclusions of economics can be considered objective.

What is debatable?

“Is everything in economics debatable?”

A student in a principles class put this question to me some years ago. Unable to answer either yes or no without a great deal of qualification, I developed a discussion focusing on what it means for a topic to be “debatable.” One component of this discussion is what we consider to be objective truth. *Objective* is often defined as free from the influence of personal feelings or values: e.g., one would like a jury to render an objective verdict, based only on the facts of the case. In a philosophical sense, *objective* refers to a reality that is independent of any one person’s perception of it: an objective truth belongs to the object of thought rather than to the person having the thought. One might then say that objective conclusions are those that are derived logically from objective truths. On the other hand, a logical or mathematical argument always

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relies on some set of axioms upon which different people may or may not agree, and furthermore there is no way to prove that any given perception of reality is trustworthy, or common to all of those perceiving it. We are then left with the notion that objective truths may exist, but we can have no certainty about anything beyond *cogito ergo sum*. And so there is arguably no true objectivity in any human endeavor; but if we can agree on observed reality and the rules of logic, we can come close enough that it isn't worth quibbling about. (Even so, I usually avoid the word *objective* in class, preferring alternatives like *concrete*. For example, market value is concrete, whereas any other notion of value is likely to be quite subjective.)

Even if objectivity is a reasonable goal to strive for, it will never be attainable in anything other than a strictly mathematical or logical argument. If we take the mathematical workings of an economic model to be indisputable, there is still the question of whether the model adequately represents a real-world situation, and what the implications of the model tell us about that real-world situation. There can be disagreement about this at a number of levels, and the nature of disagreement may be difficult to assess given the possibility that values can intrude into a logical process. Then the important question, and the one worthy of attention in class, becomes to what extent disagreement is *reasonable*.

To illustrate this point, I ask students: Is it reasonable to deny that the Holocaust actually occurred? Does the fact that there is not unanimous agreement mean that it is debatable? (One advantage of this question is that it gets their attention, but if one wishes to use a less emotionally fraught example, whether the moon landing was real can serve the same purpose.) Most students' instinctive reaction will be no, but they may not be able to articulate a justification for this instinct. I then ask them to imagine how an academic historian might react to a Holocaust denier. Would the historian simply disagree, or "agree to disagree"? More likely, the historian would question the argument underlying the Holocaust denier's claim. The historian could criticize the denier's refusal to accept certain evidence, or the reasons for doing so (which may or may not have been stated openly), or the denier's acceptance of dubious evidence, or perhaps the denier's refusal to respond to criticism directly. Acceptance of the Holocaust as historical fact is not only a majority view, but is also supported by historians using rigorous and compelling arguments, and these historians respond to Holocaust denial in a reasonable and responsible way that Holocaust deniers tend not to reciprocate.² Holocaust denial is, arguably, so difficult to support, so easy to criticize, that it does not deserve equal status with other historical views, or that one need not even take it seriously (and one can go on to criticize the feelings of injustice that arise as a reaction to this view). One cannot prove any historical fact in the same sense as proving that two plus two equals four, but acknowledging the impossibility of such proof is not the same as considering the question to be debatable in the sense that reasonable disagreement can exist.

A less extreme example illustrates the point further. I briefly describe to students the Austrian school of thought, including that it is outside the mainstream of the economics profession. I note also that, in my experience, mainstream economists may have different attitudes toward non-mainstream ideas: One might view such ideas as topics for thoughtful debate, while another might dismiss them out of hand. To take a specific example, one economist might put Austrian monetary theory in the same category as Holocaust denial, in the sense of being untenable and beneath serious consideration. Another economist might disagree with Austrian monetary theory but still take it seriously. How do we decide whether disagreement is

² Some useful references that delve into denial of the Holocaust or of the moon landing more concretely are Lipstadt (1994), Evans (1999), and Frazier (2009).

reasonable? There is simply no objective way to answer that question. It is up to the individual to decide, recognizing that the presence of any kind of disagreement does not imply that any opinion or argument is as good as any other, or that every opinion or argument is valid. This is a crucial component of the critical thinking we hope to inculcate in undergraduates.

I would say that, outside of a class in mathematics or logic, it is a mistake to try to appeal to objective truth. I never go so far as to claim that the Holocaust actually *is* historical fact, just that the opposing view is very hard to defend. There is much we can teach students about making and evaluating arguments, but to what extent different opinions are reasonable will generally be a subjective issue. Navigating that subjectivity is a burden that any intellectually responsible person must bear.³

What is science?

A more focused question that is related to the above issues is whether or to what extent economics can be considered a science. This question can generate responses and follow-up questions that make for a fruitful discussion.

I start the discussion by putting the question directly to students:

Is economics a science?

Typically there will be both yes and no responses from students, and I find it useful to probe the latter first. Common justifications for denying that economics is a science are that it is somehow different from the natural sciences or that the complexity of social phenomena precludes any kind of precise analysis. It often takes some back-and-forth to get students to articulate these objections, which I see as a beneficial exercise in itself. The comparison and contrast with the natural sciences is a key component of the discussion and a good point to consider next:

How is economics different from physics? How is it the same?

The most obvious answer to the first question is that physics deals with physical rather than social phenomena; but some students will likely argue that the results obtained in physics are more reliable and less open to interpretation than those in economics. Again, nudging students into articulating this is part of the exercise.

For the latter question, some students will want to say that economics and physics are not the same in any respect. This is a good time to come back to those students who originally supported the idea that economics is a science. Sometimes a student will cut straight to the use of the scientific method as the decisive criterion, or there may be mention of the components of the method: gathering of evidence through observation or experimentation as well as a process for interpreting the evidence. This provides an answer to the fundamental question, which until this point I will have avoided confronting directly:

What is science?

I note here that this would have been an appropriate question to address first, but that one often sees claims that economics is not a science without any consideration of how we define the term.

³ More discussion of whether and to what extent objectivity is achievable in economic arguments and their application can be found in Myrdal (1969), Putnam and Walsh (2011), and Clements (2019).

Now, if we can agree that the scientific method—the formulation and testing of hypotheses—can be applied both to physics and to economics, there is room for debate over what constitutes a test of a hypothesis, whether it necessarily involves gathering observable data or whether a theoretical argument can suffice. Also, we are left with the idea that economics somehow lacks the precision of physics and that this bears upon how much confidence we can have in the conclusions of economic analysis.

It is important to acknowledge that the social sciences generally consider highly complex, nuanced phenomena, and that a greater degree of simplification is involved in reducing those phenomena to tractable models as compared to the natural sciences. This can be a basis for criticism of any given economic argument.

This brings me to an alternative view of science for students to consider (which does not preclude use of the scientific method): that science is a system of rhetoric, a method of persuasion with its own style and norms.⁴ The view of science as a tool for persuasion dovetails with the idea of subjectivity. Whether or not one tries to make a claim of objective truth, the bottom line is often whether someone is convinced—which brings us back to the idea of making and evaluating arguments, and the possibility that one finds an argument simply unconvincing, or completely untenable.

This, finally, brings me to the point that we need not consider whether economics is a science to be a yes-or-no question. We can consider the scientific approach to economic questions as one possibility (in contrast to an historical approach, for example) with its own strengths and weaknesses. It is difficult to argue that there is absolutely no insight to be gained by considering economic questions in a scientific manner; but certainly there are pitfalls in doing so, and there may be questions for which the scientific method is not well suited. (Here I refer back to students' claims that economics is not a science, which could be classified as potential problems with the scientific approach to economics.) Alternative approaches may have different strengths and weaknesses, and one approach may be better than another with regard to a specific question. Framing the question as whether economics, by definition, is or is not a science precludes discussion of a much better set of questions: What does it mean to take a scientific approach to economic questions? What value is to be had by doing that? What problems may arise through this approach? What alternative approaches may also be valuable?

When people argue over whether economics is a science, often they are really arguing about the strengths and weaknesses of economics as a science, and in what ways scientific economic arguments are or are not compelling. These are useful issues to come back to throughout the semester.

What is economics?

With all of this discussion of what is not a necessary part of economic reasoning, there can be some confusion over what economics fundamentally is. Students may respond that it has something to do with trade, or money, or supply and demand, and all of these have in common the one element that is essential to economics and defines it as a field: scarcity. Economic agents must decide how to allocate scarce resources, and these decisions have aggregate effects. I like to use students' allocation of their own time as an example, notable in that it involves scarcity but no market or trade of any kind.

Economics does not by its very nature involve any specific methodologies, just as it does not demand the adoption of any particular beliefs or assumptions. In teaching the mainstream,

⁴ As explored in Kuhn (1996) and Gross (1990).

scientific approach to economics (as I do), we need not claim that one must always do it this way, or that one can't do it any other way. To do so would be as misleading as an economics instructor using historical methodology and claiming that no other way, including the scientific, is valid. If we're talking about scarcity, we're doing economics.

As we work through the methodology, I frequently repeat Box's (1976) comment, "All models are wrong, but some are useful." Models are never themselves true but may help us to get at some underlying truth. The important questions are how useful a model is given its limitations, and how much it contributes to understanding a particular question. All of that is debatable, and something students must decide for themselves, while recognizing how fraught those decisions can be. We can teach them the mechanics of a model in an essentially objective sense, and to be thoughtful and thorough in making and evaluating arguments. But where they go with that is up to them.

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